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A new approach to SuDS adoption in the UK

Brain Smith¹, Lian Lundy², David Strang³ and Mike Revitt²

¹Yorkshire Water Services, Western House, Halifax Road, Bradford, BD6 2SZ

²Middlesex University, The Burroughs, Hendon, London NW4 4BT

³Water UK, 3rd Floor, 36 Broadway, Westminster, London SW1H 0BH

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Introduction

In 2007 floods in the UK inundated 55,000 properties and were estimated to cause over £4 billion of damage. This triggered a national review of strategic flood risk management which identified the need for a complete overhaul and simplification of surface water management systems (Pitt, 2008). The result was the introduction of the Flood and Water Management Act (FWMA, 2010) in England and Wales, of which Schedule 3 requires the use of sustainable drainage systems (SuDS) in new developments and identifies municipalities as being responsible for their approval, adoption and maintenance. Following a government consultation (Defra, 2014) where municipalities and housebuilders raised concerns over the approach, Schedule 3 was abandoned with the government opting to facilitate SuDS delivery through an amended planning system (e.g. TCPO, 2015). However, in contrast to the mandatory obligations set out in the FWMA (2010), this new approach only carries a presumption in favour SuDS. Subsequent experiences suggest that refusals to approve SuDS schemes remain high, with a lack of clarity over long-term adoption and maintenance issues again identified as a barrier to their implementation (UK CCRA, 2017).

As evidence emerges that this approach has not led to the systematic, consistent implementation of SuDS, Defra (the UK Government department whose responsibilities include water policy development) are keen to see water and sewerage companies (WaSCs) adopt a more active stance towards SuDS adoption. There is now a material risk that if the industry does not proceed, Defra will impose a solution to the current impasse. While this has led to some WaSCs adopting a more positive approach towards SuDS (e.g. Anglian Water, 2011) others have been more cautious in indicating they may adopt SuDS. Important factors driving the current agenda include political pressures resulting from flooding and demands from the UK Climate Change Adaptation Sub-Committee (UK CCRA, 2017). It is within this context that this paper describes an initiative undertaken by Water UK (a trade organisation which represents all UK WaSCs) to explore whether, and if so how, SuDS could be regarded as sewers under the Water Industry Act (1991). This has involved the development of criteria to determine whether a particular SuDS feature is potentially adoptable by WaSCs.

Results and discussions

Traditional piped sewers are only adopted by WaSCs if they meet the requirements of Sewers for Adoption (2012). It is established in case law that a sewer is a channel for carrying away sewage and certain liquids (Ferrand, 1893; Legge, 1938), does not have to be underground nor does it have to be lined. However, as there is no definitive statement of what SuDS characteristics would qualify them for adoption as a sewer, a set of criteria to inform potentially adoptable SuDS has been proposed (see Table 1).

Under these criteria certain SuDS may qualify as public surface water sewers e.g. detention basins perform the function of carrying away water i.e. water flows in, is attenuated and then flows out. Likewise retention ponds, although a permanent water body with defined top water level, permit water to flow in and out and would also satisfy the criteria. These criteria will form the basis for the amendment of Sewers for Adoption (2012) to include SuDS as capable of adoption as a sewer under WaSCs' statutory powers. This pragmatic approach to

SuDS adoption by WaSCs provides a means of securing an industry consensus to allow SuDS to be adopted on a consistent basis across the sector. The proposal has been formally presented to the UK water industry and initial feedback was positive. The next steps involve defining draft principles, addressing strategic issues and other aspects and complexities that need to be considered and resolved: e.g. Policy Alignment, Design Standards, Land Ownership, Health & Safety, Maintenance, Adoption process, Symbolology and Legacy Assets.

Table 1. Characteristics / features which would enable (primary criteria) or preclude (negative criteria) the adoption of SuDS as sewers by WaSCs

Primary criteria	Negative criteria
It should take and deal with surface water flows from more than one building and associated yards	Form a part of a building or an associated yard
The system must actually carry away surface water	Form an integral part of a highway
The flows would otherwise be capable of being discharged to a surface water sewer	Be designed primarily as a highway drain
There must be a defined channel	Be designed primarily as a land drain
The system must have an "outfall" or disposal point or points sufficient to allow the system to fulfil its legal function of "carrying away"	Form part of a private curtilage
The system may allow for some infiltration and still be a sewer	

Conclusions

This initiative presents a major opportunity to advance how WaSCs can play an active role in relation to the adoption of SuDS and move the industry towards delivering its overall goal of providing adaptive, flexible, resilient, sustainable drainage systems. Whilst to-date neither Defra nor property developers have made a legal argument that adopting SuDS falls within the remit of WaSCs, proactively raising the issue provides WaSCs with an opportunity to inform the way in which such responsibilities could be managed. It represents a forward-thinking approach to facilitating SuDS implementation in the UK, aligns with key governmental objectives and is anticipated to have a positive reputational effect on the sector.

Acknowledgments

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References

- Anglian Water (2011) SuDS adoption manual.
http://www.anglianwater.co.uk/assets/media/AW_SUDS_manual_AW_FP_WEB.pdf
 (Accessed 27/2/17).
- Defra (2014) Consultation on Delivering Sustainable Drainage Systems. DEFRA; London.
- Ferrand (1893) Ferrand v Hallas Land and Building Company (1893) 2 QB 135. HMSO; London.
- FWMA (2010) Flood and Water Management Act.
<http://www.legislation.gov.uk/ukpga/2010/29/contents> (Accessed 27/2/17).
- Legge (1938) Legge and Son Ltd v Wenlock Corporation. AC 204, 21. HMSO; London.

Pitt M (2008) Learning the Lessons of the 2007 Floods. Cabinet Office; London.
Sewers for adoption (2012) Sewers for Adoption 7th Edition - A Design & Construction Guide for Developer. ISBN: 978 1 898920 65 6. WRc plc; Swindon.

TCPO (2015) The Town and Country Planning (General Permitted Development; England) Order. <http://www.legislation.gov.uk/uksi/2015/596/contents/made> (Accessed 27/2/17).

UK CCRA (2017). National Summary for England. <https://www.theccc.org.uk/uk-climate-change-risk-assessment-2017/national-summaries/england/> (Accessed 27/2/17)

WIA (1991) Water Industry Act. <http://www.legislation.gov.uk/ukpga/1991/56/data.pdf> (Accessed 27/2/17)